line 11, delete "has"; and

line 12, change "to the warp and undulation" to --of warps and undulations-- and after "to" (second occurrence) insert --make--.

Page 51, line 4, after "enables" delete "the";

line 5, change "process" to --required processes--;

line 7, change "is preferably formed in" to --preferably are formed at--;

line 16, after "invention" delete "can";

line 17, change "provide the" to --provides a--;

line 18, change "which has" to --with--;

line 19, after "one" delete "of the bonding methods";

line 20, change "conventional" to --conventionally--; and

line 23, change "summary are" to --summary, is--.

IN THE CLAIMS

Cancel the claims presently in the case without prejudice and substitute therefore the following new claims:

--39. A method of mounting an electronic component, said method comprising:

aligning in position bumps formed by wire-bonding on electrodes of said electronic component with electrodes of a circuit board, with interposition between said electronic component and said circuit board of insulative thermosetting resin;

hardening with heat said thermosetting resin interposed between said electronic component and said circuit board, while achieving mutual pressing between said electronic component and said circuit board at a pressure force of at least 20 gf per bump, thereby performing leveling of said bumps and correcting of any warping of said circuit board, and thereby bonding said electronic component and said circuit board together to achieve electrical connection between said mutual electrodes thereof; and

~~said hardening, said leveling and said correcting being achieved at approximately the same time.~~

40. A method as claimed in claim 39, wherein said achieving mutual pressing comprises pressing said electronic component toward said circuit board.

41. A method as claimed in claim 39, wherein said leveling and said correcting are achieved simultaneously with said hardening.

42. A method as claimed in claim 39, wherein said thermosetting resin comprises a sheet of thermosetting resin.

43. A method as claimed in claim 42, wherein said sheet has a thickness greater than a gap, existing after said bonding, between an active surface of said electronic component and a surface of said circuit board on which are formed said electrodes thereof.

44. A method as claimed in claim 39, wherein said thermosetting resin comprises a sheet of anisotropic thermosetting resin.

45. A method as claimed in claim 39, wherein said thermosetting resin comprises thermosetting resin adhesive.

46. A method as claimed in claim 39, wherein said thermosetting resin includes conductive particles.

47. A method as claimed in claim 46, wherein said particles comprise nickel particles plated with gold.

48. A method as claimed in claim 39, wherein, prior to said aligning, said thermosetting resin, in the form of a solid thermosetting resin sheet having a shape dimension smaller than an outside dimension of connection between said electrodes of said electronic component, is applied to said circuit board, and said hardening with heat comprises applying said heat to said sheet.

49. A method as claimed in claim 48, further comprising, prior to said aligning, applying conductive adhesive to said bumps.

50. A method as claimed in claim 39, wherein, prior to said aligning, said thermosetting resin, in the form of a solid thermosetting resin sheet having on at least one surface thereof a flux layer, is applied to said circuit board, and said bonding is executed by said hardening said sheet while simultaneously performing said correcting by pressing said electronic component toward said circuit board by a headed head, thereby causing said bumps to break through said sheet and causing said bumps to bond to said electrodes of said circuit board due to adhesion of a flux component of said flux layer to said bumps.

51. A method as claimed in claim 39, wherein, prior to said aligning, said thermosetting resin, in the form of a solid thermosetting resin sheet having holes formed at positions corresponding either to said bumps or to said electrodes of said circuit board and extending in a direction of extension of said bumps, with particles being embedded and electrically continuous in said holes, said particles comprising resin balls having surfaces plated with gold, nickel particles, conductive particles made of silver, silver-palladium or gold, conductive paste, or gold balls, is applied to said electrodes of said circuit board by positional alignment, and said bonding is executed by said hardening said sheet by application of heat thereto while conducting said pressing by forcing said electronic component toward said circuit board.

52. A method as claimed in claim 51, wherein each of said particles has a size greater than a thickness of a passivation film to be coated on at least said electrodes of said electronic component

and smaller than a thickness of one of said electrodes of said circuit board, and said bonding further is executed by applying ultrasonic vibrations to said electronic component.

53. A method as claimed in claim 39, further comprising applying conductive paste to said bumps, hardening said conductive paste to function as part of said bumps, and, during said bonding, forcing the thus hardened conductive paste through said thermosetting resin and forming electrical connections between said hardened conductive paste and said electrodes of said circuit board.

54. A method as claimed in claim 39, wherein said thermosetting resin comprises a thermosetting resin sheet on a side of said circuit board.

55. A method as claimed in claim 39, wherein said thermosetting resin comprises a thermosetting resin sheet on a side of said electronic component.

56. A method as claimed in claim 39, wherein said thermosetting resin comprises a thermosetting resin sheet having an anisotropic conductive film.

57. A method as claimed in claim 56, wherein said conductive film includes conductive nickel particles plated with gold.

58. An apparatus to mount an electronic component to a circuit board, said apparatus comprising:

a positional alignment device to align in position bumps formed by wire-bonding on electrodes of the electronic component with electrodes of the circuit board, with interposition between the electronic component and the circuit board of insulative thermosetting resin;

a heating device to harden with heat the thermosetting resin interposed between the electronic component and the circuit board; and

a pressing device to achieve mutual pressing between the electronic component and the circuit board at a pressure force of at least 20 gf per bump, thereby performing leveling of the bumps and correcting of any warping of the circuit board, and thereby bonding the electronic component and the circuit board together to achieve electrical connection between the mutual electrodes thereof; and

said heating device and said pressing device achieving the hardening of the thermosetting resin, the leveling of the bumps and the correcting of the warping at approximately the same time.

59. An apparatus as claimed in claim 58, wherein said pressing device presses the electronic component toward the circuit board.

60. An apparatus as claimed in claim 58, wherein said heating device and said pressing device achieve the leveling of the bumps and the correcting of the warping simultaneously with the hardening of the thermosetting resin.

61. An apparatus as claimed in claim 58, wherein said thermosetting resin comprises a sheet of thermosetting resin.

62. An apparatus as claimed in claim 61, wherein said sheet has a thickness greater than a gap, existing after the bonding, between an active surface of the electronic component and a surface of the circuit board on which are formed the electrodes thereof.

63. An apparatus as claimed in claim 58, wherein said thermosetting resin comprises a sheet of anisotropic thermosetting resin.

64. An apparatus as claimed in claim 58, wherein said thermosetting resin comprises thermosetting resin adhesive.

65. An apparatus as claimed in claim 58, wherein said thermosetting resin includes conductive particles.

66. An apparatus as claimed in claim 65, wherein said particles comprise nickel particles plated with gold.

67. An apparatus as claimed in claim 58, wherein said thermosetting resin in the form of a solid thermosetting resin sheet having a shape dimension smaller than an outside dimension of connection between the electrodes of the electronic component and is applied to the circuit board prior to the aligning by said alignment device, and said heating device applies the heat to the sheet.

68. An apparatus as claimed in claim 58, wherein said thermosetting resin is in the form of a solid thermosetting resin sheet having on at least one surface thereof a flux layer and is applied to the circuit board prior to the aligning by said aligning device, and said heating device and said pressing device comprise a heated head to execute the bonding by hardening said sheet while simultaneously performing the correcting by pressing the electronic component toward the circuit board, thereby causing the bumps to break through said sheet and causing the bumps to bond to the electrodes of the circuit board due to adhesion of a flux component of said flux layer to the bumps.

69. An apparatus as claimed in claim 58, wherein the thermosetting resin is in the form of a solid thermosetting resin sheet having holes formed at positions corresponding either to the bumps or to the electrodes of the circuit board and extending in a direction of extension of the bumps, with particles being embedded and electrically continuous in the holes, the particles comprising resin balls having surfaces plated with gold, nickel particles, conductive particles made of silver, silver-palladium or gold, conductive paste, or gold balls and is applied to the electrodes of the circuit board by positional alignment, and said heating device hardens said sheet by application of heat thereto while said pressing device conduct said pressing by forcing the electronic component toward the circuit board.

70. An apparatus as claimed in claim 69, wherein each of said particles has a size greater than a thickness of a passivation film to be coated on at least the electrodes of the electronic component and smaller than a thickness of one of the electrodes of the circuit board, and further comprising and ultrasonic device to apply ultrasonic vibrations to electronic component.

71. An apparatus as claimed in claim 58, further wherein a conductive paste is applied to the bumps, and said heating device hardens the conductive paste, and said pressing device forces the thus hardened conductive paste through the thermosetting resin and to form electrical connections between the hardened conductive paste and the electrodes of the circuit board.

72. An apparatus as claimed in claim 58, wherein the thermosetting resin comprises a thermosetting resin sheet on a side of the circuit board.

73. An apparatus as claimed in claim 58, wherein the thermosetting resin comprises a thermosetting resin sheet on a side of the electronic component.

74. An apparatus as claimed in claim 58, wherein the thermosetting resin comprises a thermosetting resin sheet having an anisotropic conductive film.

75. An apparatus as claimed in claim 74, wherein said conductive film includes conductive nickel particles plated with gold.

76. An apparatus as claimed in claim 58, wherein said alignment device and said pressing device comprise a unitary one- piece member.--

REMARKS

In view of the above amendments and the following remarks, reexamination and reconsideration are requested.